

PLACE VALUE & EXPANDED NOTATION

PRAXIS FLASHCARD #27

WHOLE NUMBER PLACE VALUE

A number in standard form is marked into groups of three digits using commas. Each of these groups is called a **period**.

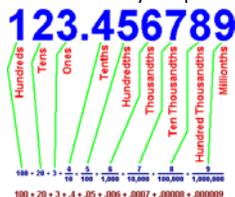


Within each group, the place values are always the 100's place, the 10's place, and the 1's place (from left to right). Understanding place value is key to understanding our number system. Decimal numbers simply extend the place values to the right and use "ths" to identify the places (e.g. 100 millionths place).

PRAXIS FLASHCARD #41

DECIMAL SYSTEM PLACE VALUE

A number in standard form is marked into groups of three digits. Each of these groups is called a **period**. Within each group, the place values are always the 100's place, the 10's place, and the 1's place. Decimal numbers simply extend the place values to the right and use "ths" to identify the places (e.g. 100 millionths place). There is not a oneths place.



PRAXIS FLASHCARD #241

BASE 10

The **Base 10** number system is the system we use – each place value is ten times the value of the place to the right of it. There are 10 digits in the Base 10 number system: 0-9. These 10 digits are all that is needed to make any number. Another name for the Base 10 number system is the decimal number system.

PRAXIS FLASHCARD #280

EXPANDED NOTATION

Expanded Notation is writing a number to show each digit's place value.

Example: Write 123,456 in expanded notation

$$(1 \times 100,000) + (2 \times 10,000) + (3 \times 1,000) \\ + (4 \times 100) + (5 \times 10) + (6 \times 1)$$

or this number can be written using exponents:

$$(1 \times 10^5) + (2 \times 10^4) + (3 \times 10^3) + \\ (4 \times 10^2) + (5 \times 10^1) + (6 \times 10^0)$$